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Understanding students' motivation towards proactive career behaviours through goal-setting theory and the job demands–resources model

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ABSTRACT



The graduate labour market is highly competitive but little is known about why students vary in their development of employability. This study contributes to the literature by applying goal-setting theory and the job demands–resources model to investigate how motivational processes influence students' proactive career behaviours. We tested four hypotheses using structural equation modelling and moderation/mediation analysis using a nested model approach; 432 undergraduates from 21 UK universities participated in this cross-sectional study. The results showed that students higher in mastery approach had greater perceived employability mediated by two proactive career behaviours (skill development and network building). Students' career goal commitment was associated with all four proactive career behaviours (career planning, skill development, career consultation and network building). Students' academic and employment workloads did not negatively impact their proactive career behaviours. University tutors and career services should therefore encourage students to set challenging career goals that reflect mastery approach.

KEYWORDS

Career behaviours;
employability; goal-setting;
motivation; self-regulation

Introduction

Graduates face an increasingly competitive labour market, and many difficulties in finding employment (Tomlinson 2012; Helyer and Lee 2014). In this labour market, individuals have become responsible for managing their own career success (Smith 2010). However, there is widespread concern that many undergraduate students are not engaging with their employability early enough (Tansley et al. 2007). Evidence suggests that undergraduate students often lack a clear understanding of employability and its importance until their final year of study (Tymon 2013). The 'employability' of graduates is consequently a strategic priority of the HE sector (Tomlinson 2012) yet there is little evidence of the cognitive and behavioural reasons why some university students fare better than other students at developing their employability. In this article, we offer a new perspective in employability research by applying goal-setting theory (Locke and Latham 1990) and the job demands–resources (JDR) model (Demerouti et al. 2001) to explain the motivational underpinnings of proactive career behaviours among students preparing for their employability after graduating from university.

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This article will begin by reviewing goal-setting theory (Locke and Latham 1990), which discusses different goal-setting approaches and their relevance to achieving goal outcomes. Goal-setting theory can explain why some students do better than others at setting challenging career goals and why some types of motivation are better than others at achieving outcomes such as engaging in practical behaviours that contribute to future employability. We will discuss literature about proactive career behaviours such as career planning, career consultation, developing skills relevant to a specific career and building career networks (e.g. Strauss, Griffin, and Parker 2012) and highlight the need for literature explaining the motivational underpinnings of proactive career behaviours among students. We will then review the JDR model (Demerouti et al. 2001) because it is important to consider not just students' motivation styles but also the opportunities and threats that they have in their academic and non-academic workloads. We will review the role of the JDR model in explaining why some students fare better than others at coping with competing demands while pursuing future employability. After summarising our hypotheses, we will report new research into the motivational styles and proactive career behaviours of 432 undergraduate students in a survey that spanned 21 universities in the UK. We will then present results from structural equation modelling (SEM) testing our hypotheses and showing how students' motivational styles increase their engagement with proactive career behaviours and help them cope with competing demands. We will then discuss theoretical implications of our findings for the employability literature and the practical implications for university students and professional/academic staff associated with employability initiatives.

Goal-setting theory

Goal-setting theory (Locke and Latham 1990) proposes that people perform better when they have 'high goals' that are specific, challenging and achievable. Locke and Latham (2013) argue that goals should be challenging because this produces a high level of motivation and requires new strategies that enhance effort or performance. Locke and Latham also argue that goals should be specific because this enables people to monitor their progress, and adjust their performance as needed. Consequently, high goals promote effort and the use of strategy to achieve desired outcomes (Locke and Latham 2013). There have been over 1000 studies supporting the goal-setting framework (Latham and Locke 2007; Seijts and Latham 2011), but little research is available on testing its application in student populations. This theoretical framework can be useful in exploring students' career goal-setting and why some students fare better than others.

Previous literature shows that there are two reasons why some people do better than others at setting challenging career goals. One reason is that they have a higher level of self-efficacy (Locke and Latham 1990; Bandura and Locke 2003; Donovan 2009) and this makes them persist at pursuing their career goals for longer (Locke and Latham 2002). In other words, people who generally believe that they are capable will try harder to succeed at more difficult tasks. This suggests that students with a high level of self-efficacy will set more ambitious career goals (this is called 'mastery'), and they will consequently engage in more proactive career behaviours. A second reason why some people do better than others at setting challenging career goals is that people differ in their tendency towards setting goals that emphasise seeking success versus avoiding failure. In regulatory focus theory, these are known as 'approach goals' and 'avoidance goals', respectively (Higgins 1997), and can depend on a person's level of interest in the task and their orientation towards seeking opportunities to challenge themselves (Donovan 2009). As a result of setting higher goals, people who set approach goals have been shown to perform better than those who set themselves avoidance goals (Elliot, McGregor, and Gable 1999). This suggests that the students who fare best at developing employability are those who set themselves approach goals emphasising success seeking rather than failure avoidance (e.g. fearing unemployment after graduating from university).

The two reasons why some people do better than others at setting challenging career goals can combine. This means that even people with a high level of self-efficacy (who typically show 'mastery'

in goal-setting) can set themselves either approach goals or avoidance goals. Achievement theorists distinguish between the type of mastery that relates to a person's own ability and the type of mastery that relates to a person's comparison of their ability or performance with that of others (Elliot and Harackiewicz 1994). Baranik, Barron, and Finney (2007) therefore discuss why some people set themselves mastery approach goals (e.g. seeking opportunities for self-improvement), whereas other people set themselves mastery avoidance goals (e.g. avoiding seeming incompetent). This theoretical approach is therefore a useful way of understanding the deeper cognitive reasons why some students (even those with a high level of self-efficacy) do better than others. Previous literature therefore suggests that students high in a mastery approach orientation to setting career goals will do best in not only setting themselves the most challenging career goals but also work on proactively building their future career, which is an important method of enhancing employability (Smith 2010).

Strauss, Griffin, and Parker (2012) define proactive career behaviours in four ways: (1) career planning, (2) career consultation, (3) developing skills connected with a specific career and (4) building career networks. Goal-setting theory can explain why some students do better than others at having the sorts of motivational styles that encourage them to engage in these behaviours as an outcome of their motivation. Goal-setting theory argues that goal commitment is an important factor relevant to goal outcomes (Hollenbeck, Williams, and Klein 1989). Goal commitment tends to be higher for learning goals where appropriate strategies or skills have not yet been developed (Klein, Cooper, and Monahan 2013). This is thought to be the consequence of higher self-efficacy for learning rather than performance goals where strategies are not yet developed (Klein, Cooper, and Monahan 2013). Tymon (2013) conducted focus group discussions with undergraduates, finding that those in the first and second years of study had a much less developed concept of employability compared to final year students. Therefore, for students developing employability, goal commitment is something that helps shape students' engagement in proactive career behaviours. Klein et al.'s (1999) meta-analytic review showed that goal difficulty moderates the relationship between goal commitment and performance, such that goal commitment has a stronger impact when goals were higher in difficulty. Goal commitment is often included as a moderator of the relationship between goal-setting and goal performance (Klein, Cooper, and Monahan 2013). Commitment is associated with persistence (Klein, Molloy, and Brinsfield 2012) and therefore higher levels of goal commitment are likely to increase persistence with challenging goals. However, previous literature does not tell us whether students' career goal commitment actually enhances the effects of a mastery approach orientation on student engagement with proactive career behaviours.

In summary, goal-setting theory can explain individual differences in students' motivation towards setting career goals and acting on these goals by engaging in behaviours that will enhance their future employability. However, goal-setting theory does not tell us why some people fare better than others at coping with competing demands that hinder their goal outcomes. Among students working towards their future employability, studies, part-time work and other activities outside university can either help or hinder the time or opportunities that they have to engage in proactive career behaviours. In the next section, we review the JDR model, a theoretical approach that explains conditions under which people pursuing goals cope effectively with competing demands.

The JDR model

University students working towards their future employability have several competing demands (e.g. class attendance, coursework, exams and part-time or full-time jobs), and this presents a 'demand conflict'. These other commitments can either help or hinder students' future employability. For example, having a job alongside studying at university can offer a student useful employment experience (Smith 2010) if the job presents them with opportunities relevant to their future career plans. However, this does not apply to all jobs filled by students because many take them for financial reasons (Robotham 2012). Likewise, some undergraduate programmes (also known as first cycle

degrees, e.g. Lindberg 2009) present students with opportunities to build their future employability (e.g. through internships and job-shadowing)); therefore, they are useful employability resources whereas other courses do not. Students' academic and employment workloads are therefore two types of demand that compete with or enhance their engagement in proactive career behaviours.

We can apply the JDR model (Demerouti et al. 2001), which treats job characteristics as demands or resources. Job resources include the opportunity for work autonomy and feedback; this promotes job prospects and improves a person's perceptions of their employability (Van Emmerik et al. 2012). For a student who works part-time, the job can be a useful resource but elements of the job (e.g. a zero-hours contract) can weaken employability gains. De Cuyper et al. (2012) reported that job insecurity can threaten a person's confidence in their employability. In contrast to job resources, job demands require energy and effort to manage, while job resources enable goal achievement, reduce demands or provide opportunities for personal development. Research has shown that job demands predict psychological strain, while job resources predict motivation (Bakker and Demerouti 2007). The JDR model suggests that, together, demands and resources help to explain emotional exhaustion and worker disengagement. Following the concept of loss and gain spirals (e.g. Bakker and Demerouti 2007) it is possible that students who are concerned about performing poorly in their studies or struggling in their job may withdraw effort from proactive career behaviours, thus neglecting to develop elements of their job resources that should promote employability.

In summary, there is a complex interaction between a student's job demands and the resources presented by the same job. Bakker et al. (2007) showed that resources are more protective when demands are high. Van Emmerik et al. (2012) called for research into how job demands and resources interact in enhancing employability; therefore, new research can be useful in filling this gap. The demands of a students' workload can have an impact on the motivational processes that underpin employability (as we discussed earlier in the section on goal-setting), specifically by weakening the association between mastery approach and proactive career behaviours. Students who have a stronger mastery approach orientation could be good at dividing their efforts appropriately between proximal workload demands (completing the degree and maintaining part-time work) and the more distal demands of career preparation.

Aims and hypotheses

This study will fill the gap in the employability literature by probing the role of motivational processes in students' engagement with proactive career behaviours. We offer a new perspective to employability research by applying goal-setting theory (Locke and Latham 1990) and the JDR model (Demerouti et al. 2001) to explore why some students do better than others in engaging in proactive career behaviours. We examine these proactive career behaviours based on the definition provided by Strauss, Griffin, and Parker (2012) because of the lack of measurement of these behaviours in previous employability studies (e.g. De Cuyper et al. 2012; Van Emmerik et al. 2012). We also examine students' perceptions about their employability and probe how motivational processes and proactive career behaviours shape these perceptions. This study therefore has the potential to inform universities, personal tutors and career services supporting students' engagement with employability. Drawing on our review of goal-setting theory and the JDR model, we will test the following hypotheses:

H₁: Self-efficacy is positively associated with the mastery approach.

H₂: Proactive career behaviours mediate the relationship between the mastery approach and perceived employability.

H₃: Goal commitment moderates the relationship between the mastery approach and proactive career behaviours.

H₄: Perceptions of workload pressure moderate the relationship between the mastery approach and proactive career behaviours.

Method

Design and participants

We adopted a cross-sectional design in an online student survey of goal commitment, proactive career behaviours, perceived employability, academic workload, employment workload, self-efficacy and achievement goals. We recruited 432 undergraduate students from 21 UK universities during 2015. Due to the online nature of this survey, it is not possible to estimate the response rate (Van Selm and Jankowski 2006). We sought a stratified sample by advertising the survey to a variety of universities (see Table 1) and degrees representing both vocational and non-vocational courses at a mixture of pre- and post-1992 institutions. The mean age of the sample was 22.95 years ($SD = 6.92$). Of the participants, 86.3% were engaged in full-time studies, 71.5% identified as female and 58.1% identified as white British. Of the sample, 53.5% indicated that they were in paid or unpaid work, while 37% indicated that they were not.

Just over one-quarter (28.2%) of the participants were studying for a psychology degree, 18.5% were studying a life sciences degree (18.5%), 18.3% nursing or midwifery (18.3%) and the rest a variety of degrees. Different universities were represented: no more than 19.7% of participants came from a single institution.

Measures

We measured the variables using the following pre-existing and validated published instruments.

Self-efficacy was measured using the *New General Self-Efficacy Scale* (NGSE; Chen, Gully, and Eden 2001). The NGSE comprises 8 items which measures self-efficacy on a 5 point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree). An example item is 'Even when things are tough, I can perform quite well.'

Mastery approach was measured using the Mastery Approach subscale from the *Achievement Goals for a Work Domain* measure (Baranik, Barron, and Finney 2007). This subscale was measured on a 7-point Likert scale seeking participant agreement with statements (ranging from 1 = Not at all true of me to 7 = Very true of me). The subscale comprises four items. An example item is 'I often look for opportunities to develop new skills and knowledge.'

Table 1. Universities represented in the survey.

University	Participants
University of Bedfordshire	85
Cardiff University	63
Glasgow Caledonian University	52
University College London	28
Queen's University Belfast	26
University of Hull	25
Birmingham City University	20
Birkbeck, University of London	18
Middlesex University	13
University of Exeter	13
Oxford Brookes University	12
Coventry University	11
University of Cumbria	8
University of Reading	8
Goldsmiths, University of London	3
Anglia Ruskin University	2
Open University	1
School of African and Oriental Studies, University of London	1
University of Dundee	1
University of Greenwich	1
University of Nottingham	1

Goal commitment was measured using the *Klein et al. Unidimensional Target-free* measure (Klein et al. 2014). The measure comprises 4 items on a 5-point Likert scale, asking participants to indicate commitment to a target (ranging from 1 = not at all to 5 = extremely). The measure is designed for researchers to specify a commitment target. We used the target descriptor 'career goals'. An example item is 'How dedicated are you to [your career goals]?'.

Perceived workload demands were measured using an adaptation of the work pressure subscale from the *Work Characteristic Measure* (ten Brummelhuis et al. 2008). Perceived workload pressure comprised three items on a 5-point Likert scale, which assessed how often individuals perceive themselves to be under pressure (from 1 = never to 5 = daily). An example item is 'I always have a lot of work to do.' Academic-related and employment-related (both paid and unpaid) workload were measured as distinct variables.

Proactive career behaviours were measured using the *Proactive Career Behavior Measure* (Strauss, Griffin, and Parker 2012). The measure comprises 12 items, assessing participants' agreement with statements about their proactive career behaviours. The measure uses a 5-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree). The measure consists of four subscales. The subscales are career planning, proactive skill development, career consultation and network building. All subscales comprised three items. An example item is 'I engage in career path planning.'

Students' perceptions of their employability were measured using the *Perceived Employability Measure* (Kirves et al. 2014). This measure records the extent to which participants agree with statements about their employability, and comprises 3 items on a 7-point Likert scale (ranging from 1 = totally disagree to 7 = totally agree). An example item is 'My experience is in demand on the labor market.'

Procedure

Ethical approval was granted by the lead author's university committee. We then sought permission from a variety of universities to recruit their students for this online survey, hosted at Qualtrics. Students learnt of the survey either through emails sent on our behalf by university departments or through posters that we placed (or were placed on our behalf) within the campuses of participating institutions. Both message formats invited students to complete a short survey on the subject of employability. In ordering the measures detailed above, we engaged in measure counter-balancing such that students saw the measures in different orders as a way of preventing order effects on participant responses (see Podsakoff et al. 2003). As an incentive, students were given the opportunity to enter a prize draw for a £20 voucher. The study was conducted in accordance with the BPS code of ethics and conduct (2009): participants could withdraw from the study at any time, data were kept confidentially, students were advised that participation was voluntary and they were given the opportunity to use a password that they could use if they wanted to withdraw from the study at any stage up to two weeks after participation. No identifying information was required of participants except an email address in the event that they wished to enter the prize draw or wanted a summary of the findings. We stored the students' email addresses separate from the dataset to maintain confidentiality. The survey data were exported from Qualtrics and stored in password protected computers.

Data analysis

We tested our hypotheses using SEM through AMOS version 21.0. We adopted an 'alternative models approach' (see Byrne 2010) whereby we compared a priori theoretical models for statistical goodness of fit (MacCallum et al. 1993) as a method of testing competing theoretical explanations (Penke and Dearly 2010). We adopted a nested model approach to testing for moderation and mediation effects (MacCallum, Browne, and Cai 2006) – in other words the full model was compared to more parsimonious models. We used a method by Sauer and Dick (1993) to conduct mediation and moderation

analysis. Missing data were dealt with using maximum likelihood estimation in line with methodology by Allison (2003). Before SEM, we used SPSS to create a mean score for each student per variable, then to inspect the data for correlations and descriptive results.

Results

We checked the data for multicollinearity using SPSS; correlation analysis showed that there were strong correlations between some variables (e.g. between proactive career behaviours) but no correlations were identified as strong enough to suggest a multicollinearity problem. Table 2 shows the pattern of relationships among our survey variables.

In order to test the hypotheses, SEM was conducted on the full model (Figure 1) and this had acceptable statistical fit (Table 3).

Next, we tested the nested models. This involved a series of stages in which individual variables were removed from the full model. This allowed the testing of mediation and moderation effects, i.e. by examining the effect of removing a moderator from the full model. Table 3 shows how different models performed on fit indices.

As shown in Table 3, models 1 and 2 met the RMSEA criteria of PCLOSE above 0.50. Model 2, compared to the full model, showed an improvement to the CFI, but a decrement to the normed χ^2 index (i.e. the χ^2/df ratio). Consequently, we retained model 1 as the best fitting model. Model 1 explained 21.3% of the variance in perceived employability. Figure 2 shows pathway coefficients for model 1 – only significant pathways are shown in the figure.

Testing hypothesis 1: In the first hypothesis, we predicted that self-efficacy would be positively associated with mastery approach. In model 1, there was a strong positive association between self-efficacy and mastery approach ($\beta = 0.57, p < .001$). Therefore, hypothesis 1 was accepted.

Testing hypothesis 2: In the second hypothesis, we predicted that proactive career behaviours mediate the association between a students' mastery approach and their perceived employability. In model 9, only self-efficacy, mastery approach and perceived employability were included. In this model, mastery approach was significantly related to perceived employability ($\beta = 0.27, p < .001$). In all models that included proactive career behaviours, this pathway was nonsignificant. Consistently across models, including model 1, only skill development ($\beta = 0.26, p < .001$) and network building ($\beta = 0.18, p = .002$) were significantly associated with perceived employability. This suggests that

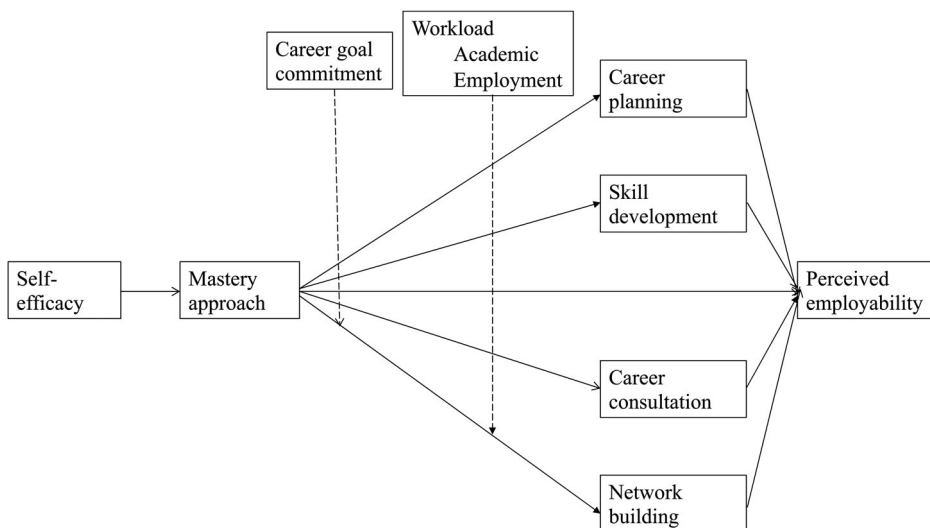


Figure 1. Theoretical model of undergraduate student employability.

Table 2. The pattern of relationships among survey variables.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12
1. Year of study	1.85	0.81	–											
2. Age	22.95	6.92	0.45 [†]	–										
3. Self-efficacy	3.84	0.62	0.10*	0.17*	(0.89)									
4. Academic workload	2.88	0.71	0.20 [†]	0.19 [†]	0.06	(0.78)								
5. Employment workload	2.00	1.13	0.14**	0.32 [†]	0.12	0.32 [†]	(0.96)							
6. Goal commitment	4.25	0.80	0.08	0.23 [†]	0.39 [†]	0.15**	0.18***	(0.91)						
7. Mastery approach	6.62	1.13	0.11*	0.23 [†]	0.49 [†]	0.18 [†]	0.27 [†]	0.41 [†]	(0.83)					
8. Career planning	4.06	0.83	0.31 [†]	0.27 [†]	0.33 [†]	0.24 [†]	0.24 [†]	0.55 [†]	0.29 [†]	(0.89)				
9. Skill development	3.98	0.74	0.14**	0.23**	0.37 [†]	0.22 [†]	0.24 [†]	0.44 [†]	0.36 [†]	0.51 [†]	(0.76)			
10. Career consultation	3.64	0.88	0.15**	0.21 [†]	0.28 [†]	0.09	0.15*	0.50 [†]	0.25 [†]	0.53 [†]	0.47 [†]	(0.76)		
11. Networking	3.23	1.08	0.12*	0.14**	0.29 [†]	0.10	0.25 [†]	0.37 [†]	0.25 [†]	0.39 [†]	0.46 [†]	0.58 [†]	(0.92)	
12. Perceived employability	4.12	1.46	0.07	0.20 [†]	0.35 [†]	–0.05	0.18 [†]	0.22 [†]	0.16***	0.30 [†]	0.34 [†]	0.32 [†]	0.34 [†]	(0.85)

Notes: *N* = 345–406, alpha coefficients are reported on the diagonal, Year of study: 1 = First year; 2 = second year, 3 = final year.

**p* < .05.

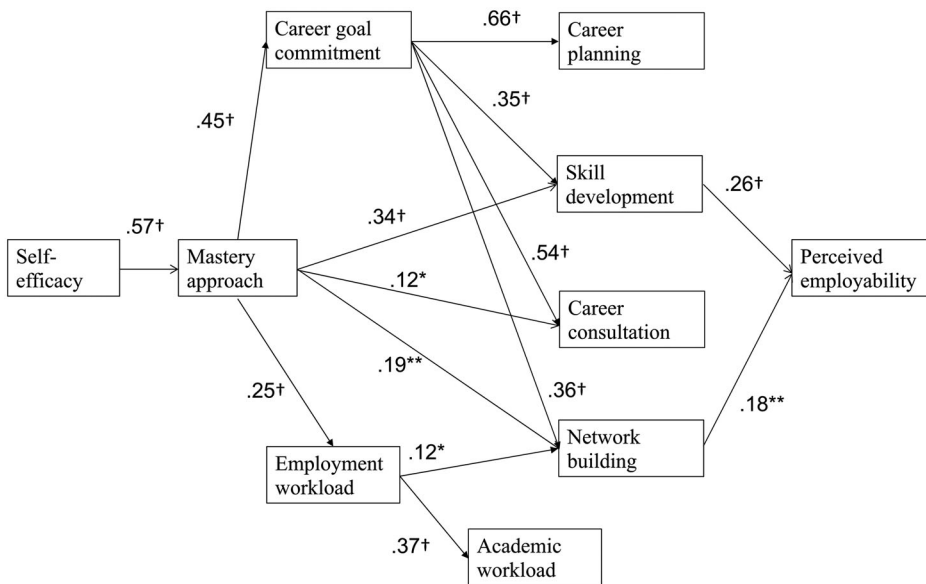
***p* < .01.

****p* < .005.

[†]*p* < .001.

Table 3. Fit indices for models tested.

Model	χ^2	χ^2/df ratio	RMSEA	Lo 90	Hi 90	PCLOSE	CFI	PNFI
1	1212.33, df = 609 $p < .001$	1.99	0.05	0.04	0.05	0.80	0.93	0.76
2	1194.95, df = 603 $p < .001$	1.98	0.05	0.04	0.05	0.83	0.93	0.75
3	1052.31, df = 507 $p < .001$	2.08	0.05	0.05	0.05	0.50	0.94	0.75
4	1103.66, df = 507 $p < .001$	2.18	0.05	0.05	0.06	0.19	0.92	0.74
5	985.84, df = 419 $p < .001$	2.35	0.06	0.05	0.06	0.02	0.92	0.74
6	1157.18, df = 474 $p < .001$	2.44	0.06	0.05	0.06	0.001	0.91	0.89
7	1020.83, df = 390 $p < .001$	2.62	0.06	0.06	0.07	<0.001	0.91	0.73
8	1078.23, df = 390 $p < .001$	2.77	0.06	0.06	0.07	<0.001	0.89	0.71
9	971.74, df = 314 $p < .001$	3.10	0.07	0.07	0.08	<0.001	0.89	0.70
10	291.27, df = 88 $p < .001$	3.31	0.07	0.06	0.08	<0.001	0.93	0.66

**Figure 2.** Final model with β coefficients. Only significant pathways are shown. * $p < .05$, ** $p < .01$, $^+p < .001$.

two proactive career behaviours (skill development and network building) fully mediate the association between mastery approach and perceived employability. Consequently, hypothesis 2 was partially supported.

Testing hypothesis 3: In the third hypothesis, we predicted that goal commitment moderates the relationship between a student's mastery approach and proactive career behaviours. For a moderator effect to be assumed, there should be no significant pathway between the predictor variable and the moderator variable, nor between the moderator variable and the outcome variable. However, the results showed that there is a significant association between goal commitment and mastery approach, as shown in model 1 ($\beta = 0.45$, $p < .001$); goal commitment was significantly associated with career planning ($\beta = 0.66$, $p < .001$), skill development ($\beta = 0.35$, $p < .001$), career consultation ($\beta = 0.54$, $p < .001$) and network building ($\beta = 0.36$, $p < .001$). Thus, the evidence suggests that goal commitment acts as a mediator, not a moderator. In model 5, where goal commitment is removed, the pathway between mastery approach and career planning is significant ($\beta = 0.35$, $p < .001$). Given that this pathway is nonsignificant in model 1, goal commitment appears to fully mediate the association between mastery approach and career planning. By contrast the associations between mastery approach and proactive career behaviours other than career planning are partially

mediated by goal commitment. Given that goal commitment served as a mediator rather than a moderator, hypothesis 3 was not supported.

Testing hypothesis 4: In hypothesis 4, we predicted that workload has a moderating effect on the relationship between mastery approach and proactive career behaviours. In model 1, both workload measures were included; in models 2 and 3, academic and employment-related workload were removed respectively. The pathways between mastery approach and proactive career behaviours remained similar in all three models, suggesting that there is no moderation effect for workload. Consequently, hypothesis 4 was not supported. Academic workload was not significantly associated with mastery approach, nor with any form of proactive career behaviour. By contrast, mastery approach was significantly associated with employment-related workload ($\beta = 0.25$, $p < .001$), which was in turn significantly associated with network building, albeit weakly ($\beta = 0.11$, $p = .003$). The inclusion or exclusion of employment-related workload did not affect whether the association between mastery approach and network building was significant, suggesting a partial mediation effect for employment-related workload.

Discussion

Our aim was to examine the extent to which motivational processes explain student engagement with employability (the understandings and experiences that contribute to career success; Knight and Yorke 2004) through proactive career behaviours (strategies for career management). This study contributes to the need for research about barriers to students' engagement with employability. We offer a new perspective by applying both goal-setting theory (Locke and Latham 1990) and the JDR model (Demerouti et al. 2001). Previous research (e.g. Van Emmerik et al. 2012) has applied the JDR model to employability. Van Emmerik et al. (2012) found that the presence of resources such as opportunity for autonomy was relevant for perceptions of employability, but their research did not address the impact of demands. To the best of our knowledge, this research is the first to examine the motivational processes underpinning student employability using goal-setting theory as a framework. This motivational approach presents a method for enhancing students' employability, although we note that this focuses on individuals' relative advantage. The employability of graduates in general is influenced by labour market structure (Brown and Hesketh 2004).

The full structural equation model in our results provided an acceptable fit to the data although evidence for some of our hypotheses was mixed. Mastery approach was positively related to career consultation, skill development and network building, but not to career planning. Skill development and network building behaviours fully mediated the relationship between mastery approach orientation and perceived employability. University interventions to enhance student employability are most likely to be seen as effective by students when they target skill development and when they provide opportunities for networking. However, neither career planning nor career consultation was significantly associated with perceived employability. This finding raises concerns about whether students are making full use of university career services. Undergraduates often have negative beliefs about career services, and prefer to speak with lecturers already known to them (Greenbank 2011). In order to assist students in forming appropriate career goals, it may be helpful to train personal tutors in goal-setting. An alternative interpretation is that career planning and consultation have an indirect effect upon perceived employability. Strauss, Griffin, and Parker (2012) tested proactive career behaviours as an outcome of motivational processes. It could be fruitful in future to test whether career planning and career consultation themselves produce motivational outcomes. For example, a student who consults a member of their intended profession can set clear goals concerning skills needed to achieve career success.

Skill development and network building were found to have a significant impact on perceived employability, but these relationships were weak. We measured students' self-reports of proactive career behaviours; therefore, further research should try and capture the objective state of their human capital (e.g. via skill audit) and social capital (e.g. via network analysis). Using a self-report

method may not fully capture a student's capabilities because evidence shows that students vary in their ability to accurately assess aspects of their level of capital. For example, Jackson (2014) reported that those students lower in actual ability were more likely to overrate their own employability skills. We also encourage future researchers to examine subject differences. Students can benefit to an extent from developing a network in order to secure gainful employment, but network building might not be as necessary in professions such as medicine, nursing or teaching where professional regulation and demand are both high. Similarly, work placements have different outcomes for different students, depending on their career goals. There is evidence that participation in work placements enhances employment prospects (Mason, Williams, and Cranmer 2009), but the impact on skill development is more complex. Wilton (2012) reported that graduates in generalist careers (i.e. unrelated to their degree) had greater perceptions of their skill development compared to those who did not take part in placements, whilst those in specialist careers felt less benefit. Thus it is important for university careers advisers and personal tutors to consider the strategies different students use for skill development in the context of the careers the students aspire towards. Similarly students may differ in their strategies for developing useful networks. For example, many undergraduates prefer to seek career advice from existing (rather than new) contacts, and thus may fail to access the best information available (Greenbank 2011). Consequently, the self-reported network building activities may vary in efficacy. Future research should explore how and when students successfully develop networks that cross organisational boundaries and include senior members of organisations. These provide channels of information and potential career sponsorship (Seibert, Kraimer, and Liden 2001); future research should explore whether such strategies enhance students' employability.

Our results additionally suggests that goal commitment mediates (not moderates, as we hypothesised) the relationship between mastery approach orientation and students' proactive career behaviours. Commitment is associated with persistence (Klein, Molloy, and Brinsfield 2012), and may therefore lead students who have the most ambitious goals to persist with these challenges. Given the strength of the associations between goal commitment and the proactive career behaviours, we argue that it is important for university careers advisers and personal tutors to encourage career goal commitment in students. This could enhance students' engagement with proactive career behaviours, and potentially lead them to feel more employable. Feedback has been identified as necessary to making challenging goals successful (Erez 1977). Feedback also enhances students' sense of professional identity and commitment (e.g. Clements et al. 2016). We therefore urge university careers advisers and personal tutors to give students feedback about their proactive career behaviours in order to enhance their career goal commitment.

We found no evidence to suggest that the academic workload and/or employment workload interacts with mastery approach in predicting students' proactive career behaviours. This suggests that students' workload demands do not significantly affect the link between challenging career goals and proactive career behaviours. This is a promising finding because immediate demands such as academic workload are not necessarily distracting students from developing their employability. In some of the previous research using the JDR model, resources and demands have been found to interact (e.g. Bakker, Demerouti, and Euwema 2005), whereas other studies found no moderation effect (e.g. Hu, Schaufeli, and Taris 2011). University careers advisers and personal tutors should therefore not consider students' immediate workload demands as a barrier to future employability.

We found that students' perceptions about their workload generally had no significant effect on their proactive career behaviours with the exception of a weak mediation between mastery approach and network building via perceived employment workload. One possible reason for this is that most students find good methods of coping and are doing well in persisting with their career goals despite other pressures. Demerouti, Bakker, and Leiter (2014) reported that workers can reduce the impact of burnout on job performance by engaging in compensatory practices such as finding alternative ways of achieving goals or seeking help from colleagues. Future research should explore how such practices and students' well-being shape their coping with workload demands and employability. Tymon

(2013) reported that students are aware of the importance of personal attributes such as adaptability and resilience. Given that striving – the process of goal progression and goal maintenance – is an element of self-regulation (Day and Unsworth 2013), we suggest that future research explores the effects of students' resilience on their engagement with proactive career behaviours. Future research should longitudinally explore how students develop resilience during their degrees, and how this shapes employability.

We originally assumed that students' workload would represent demands for time and effort, reducing the time available for proactive career behaviours. This is because the majority of students do not work in jobs related to their intended career (Robotham 2012). Academic workload is also a priority for students. Considering that our hypothesis was not supported by the data we realise, in hindsight this was a somewhat simplistic assumption. For some students a part-time job can be a barrier, but for other students work can facilitate proactive career behaviours. There is a growing body of research exploring the impact of multiple goals, which suggests that while goals can be in conflict goals may also be mutually supportive (Sun and Frese 2013). We encourage future researchers to probe the role of goal conflict and goal facilitation in furthering understanding of when students' employment facilitates or hinders their proactive career behaviours. Our present findings suggest students higher in mastery approach orientation also have higher workload – but this higher workload does not appear to distract students from proactive career behaviours. As Bipp and Demerouti (2015) reported, people who are high in approach temperament tend to seek both resources and demands. We can also conclude that reducing students' workload is unlikely to make them engage in more proactive career behaviours, and therefore should not form the basis of employability interventions.

Conclusions

We encourage academics and university staff working on student employability to apply our findings through three types of interventions. (1) Train students about goal-setting theory (Locke and Latham 1990) and optimum goal-setting techniques such as setting 'high goals' that are challenging, specific and achievable. (2) Train students about optimum career behaviours such as career planning, building career networks, career consultation and career skills-building so that students are aware of the different strategies (Strauss, Griffin, and Parker 2012). (3) Facilitate proactive career behaviours as a formal part of a student's degree (e.g. organise career networking events so that students can meet professionals from their target industry, design job placement modules within undergraduate degrees so that students can build skills that are in demand within their target industry and host workshops that encourage students to engage in career planning). The first two of the interventions that we suggest involve using training as a method of giving students theoretical knowledge relevant to employability, a method shown in previous research to be useful (e.g. Kamau and Spong 2015). Future research should develop a training protocol that can be emulated in other degrees or universities. The third intervention that we suggest is supported by ample evidence from previous literature. For example, evidence shows the benefit of career management skills modules (e.g. Komarraju, Swanson, and Nadler 2014; Taylor and Hooley 2014) and job placements (Tyron 2013; Thune and Støren 2015) which enable skill development (Wilton 2012), development of self-efficacy (Freudenberg, Cameron, and Brimble 2011; Smith and Worsfold 2015) and enhance future employment opportunities (Mason, Williams, and Cranmer 2009). Our suggestion of training students (e.g. about optimum goal-setting techniques) should boost the effectiveness of employability initiatives such as job placements based on previous evidence (e.g. Jackson 2015; Jackson and Wilton 2016).

We encourage future researchers to test our SEM results using a longitudinal method that surveys students before and after graduation because longitudinal studies are a good test of causality (De Lange et al. 2003) and this can clarify the actual employment outcomes of goal-setting and other concepts. Secondly, we encourage future researchers to trial the three interventions that we propose. There is some experimental work into interventions that build employability skills (e.g. Kamau and

Spong 2015) but more experimental studies are needed. Future experimental research should compare cohorts of students who receive the training interventions with matched-cohorts of students who do not, exploring whether cohorts that receive training about goal-setting theory and proactive career behaviours have significantly better employability outcomes.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

- Allison, P. D. 2003. "Missing Data Techniques for Structural Equation Modelling." *Journal of Abnormal Psychology* 112 (4): 545–57.
- Bakker, A. J., and E. Demerouti. 2007. "The Job Demands-Resources Model: State of the Art." *Journal of Managerial Psychology* 22 (3): 309–28.
- Bakker, A. B., E. Demerouti, and M. C. Euwema. 2005. "Job Resources Buffer the Impact of Job Demands on Burnout." *Journal of Occupational Health Psychology* 10 (2): 170–80.
- Bakker, A. J., J. J. Hakanen, E. Demerouti, and D. Xanthopoulou. 2007. "Job Resources Boost Engagement, Particularly When Job Demands Are High." *Journal of Educational Psychology* 99 (2): 274–84.
- Bandura, A., and E. A. Locke. 2003. "Negative Self-efficacy and Goal Effects Revisited." *Journal of Applied Psychology* 88 (1): 87–99.
- Baranik, L. E., K. E. Barron, and S. J. Finney. 2007. "Measuring Goal Orientation in a Work Domain: Construct Validity Evidence for the 2x2 Framework." *Educational and Psychological Measurement* 67 (4): 697–718.
- ten Brummelhuis, L. L., T. van der Lippe, E. S. Kluwer, and H. Flap. 2008. "Positive and Negative Effects of Family Involvement on Work-Related Burnout." *Journal of Vocational Behavior* 73 (3): 387–96.
- Bipp, T., and E. Demerouti. 2015. "Which Employees Craft Their Jobs and How? Basic Dimensions of Personality and Employees' Job Crafting Behaviour." *Journal of Occupational and Organizational Psychology* 88 (4): 631–55.
- BPS (British Psychological Society). 2009. *Code of Ethics and Conduct: Guidance Published by the British Psychological Society*. Leicester: British Psychological Society.
- Brown, P., and A. Hesketh. 2004. *The Mismanagement of Talent*. Oxford: Oxford University Press.
- Byrne, B. M. 2010. *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*. New York: Routledge.
- Chen, G., S. M. Gully, and D. Eden. 2001. "Validation of a New General Self-efficacy Scale." *Organizational Research Methods* 4 (1): 62–83.
- Clements, A. J., G. Kinman, S. Leggetter, K. Teoh, and A. Guppy. 2016. "Exploring Commitment, Professional Identity, and Support for Student Nurses." *Nurse Education in Practice* 16 (1): 20–26.
- Day, D. V., and K. L. Unsworth. 2013. "Goals and Self-regulation: Emerging Perspectives Across Levels and Time." In *New Developments in Goal Setting and Task Performance*, edited by E. A. Locke and G. P. Latham, 158–76. Hove: Routledge.
- De Cuyper, N., A. Mäkikangas, U. Kinnunen, S. Mauno, and H. De Witte. 2012. "Cross-lagged Associations Between Perceived External Employability, Job Insecurity, and Exhaustion: Testing Gains and Loss Spirals According to the Conservation of Resources Theory." *Journal of Organizational Behavior* 33: 770–88.
- De Lange, A. H., T. W. Taris, M. A. J. Kompier, I. L. D. Houtman, and P. M. Bongers. 2003. "The Very Best of the Millennium: Longitudinal Research and the Demand-Control-(Support) Model." *Journal of Occupational Health Psychology* 8 (4): 282–305.
- Demerouti, E., A. B. Bakker, and M. Leiter. 2014. "Burnout and Job Performance: The Moderating Role of Selection, Optimization, and Compensation Strategies." *Journal of Occupational Health Psychology* 19 (1): 96–107.
- Demerouti, E., A. J. Bakker, F. Nachreiner, and W. B. Schaufeli. 2001. "The Job Demands-Resources Model of Burnout." *Journal of Applied Psychology* 86 (3): 499–512.
- Donovan, J. J. 2009. "Antecedents of Discrepancy Production in an Achievement Setting." *Journal of Managerial Issues* 21 (3): 402–20.
- Elliot, A. J., and J. M. Harackiewicz. 1994. "Goal Setting, Achievement Orientation, and Intrinsic Motivation: A Medial Analysis." *Journal of Personality and Social Psychology* 66 (5): 968–80.
- Elliot, A. J., H. A. McGregor, and S. Gable. 1999. "Achievement Goals, Study Strategies, and Exam Performance." *Journal of Educational Psychology* 91 (3): 549–63.

- Erez, M. 1977. "Feedback: A Necessary Condition for the Goal Setting-Performance Relationship." *Journal of Applied Psychology* 62 (5): 624–27.
- Freudenberg, B., C. Cameron, and M. Brimble. 2011. "The Importance of Self: Developing Students' Self-efficacy Through Work Integrated Learning." *The International Journal of Learning* 17 (10): 479–96.
- Greenbank, P. 2011. "'I'd Rather Talk to Someone I Know than Somebody Who Knows' – The Role of Networks in Undergraduate Career Decision-Making." *Research in Post-Compulsory Education* 16 (1): 31–45.
- Helyer, R., and D. Lee. 2014. "The Role of Work Experience in the Future Employability of Higher Education Graduates." *Higher Education Quarterly* 68 (3): 348–72.
- Higgins, E. T. 1997. "Beyond Pleasure and Pain." *American Psychologist* 52 (12): 1280–1300.
- Hollenbeck, J. R., C. R. Williams, and H. J. Klein. 1989. "An Empirical Examination of the Antecedents of Commitment to Difficult Goals." *Journal of Applied Psychology* 74 (1): 18–23.
- Hu, Q., W. B. Schaufeli, and T. W. Taris. 2011. "The Job Demands-Resources Model: An Analysis of Additive and Joint Effects of Demands and Resources." *Journal of Vocational Behavior* 79: 181–90.
- Jackson, D. 2014. "Self-assessment of Employability Skill Outcomes among Undergraduates and Alignment with Academic Ratings." *Assessment & Evaluation in Higher Education* 39 (1): 53–72.
- Jackson, D. 2015. "Employability Skill Development in Work-Integrated Learning: Barriers and Best Practice." *Studies in Higher Education* 40 (2): 350–67.
- Jackson, D., and N. Wilton. 2016. "Developing Career Management Competencies among Undergraduates and the Role of Work-Integrated Learning." *Teaching in Higher Education* 21 (3): 266–86.
- Kamau, C., and A. Spong. 2015. "A Student Teamwork Induction Protocol." *Studies in Higher Education* 40 (7): 1273–1290.
- Kirves, K., U. Kinnunen, N. De Cuyper, and A. Mäkikangas. 2014. "Trajectories of Perceived Employability and Their Associations with Well-being at Work: A Three-Wave Study." *Journal of Personnel Psychology* 13 (1): 46–57.
- Klein, H. J., J. T. Cooper, J. C. Molloy, and J. A. Swanson. 2014. "The Assessment of Commitment: Advantages of a Unidimensional, Target-Free Approach." *Journal of Applied Psychology* 99 (2): 222–38.
- Klein, H. J., J. T. Cooper, and C. A. Monahan. 2013. "Goal Commitment." In *New Developments in Goal Setting and Task Performance*, edited by E. A. Locke and G. P. Latham, 65–89. Hove: Routledge.
- Klein, H. J., J. C. Molloy, and C. T. Brinsfield. 2012. "Reconceptualizing Workplace Commitment to Redress a Stretched Construct: Revisiting Assumptions and Removing Confounds." *Academy of Management Review* 37 (1): 130–51.
- Klein, H. J., M. J. Wesson, J. R. Hollenbeck, and B. J. Alge. 1999. "Goal Commitment and the Goal-Setting Process: Conceptual Clarification and Empirical Synthesis." *Journal of Applied Psychology* 84 (6): 885–96.
- Knight, P., and M. Yorke. 2004. *Learning, Curriculum and Employability in Higher Education*. Abingdon: Routledge.
- Komarraju, M., J. Swanson, and D. Nadler. 2014. "Increased Career Self-efficacy Predicts College Students' Motivation, and Course and Major Satisfaction." *Journal of Career Assessment* 22 (3): 420–32.
- Latham, G. P., and E. A. Locke. 2007. "New Developments in and Directions for Goal-Setting Research." *European Psychologist* 12 (4): 290–300.
- Lindberg, M. E. 2009. "Student and Early Career Mobility Patterns among Highly Educated People in Germany, Finland, Italy, and the United Kingdom." *Higher Education* 58 (3): 339–58.
- Locke, E. A., and G. P. Latham. 1990. "Work Motivation and Satisfaction: Light at the End of the Tunnel." *Psychological Science* 1 (4): 240–46.
- Locke, E. A., and G. P. Latham. 2002. "Building a Practically Useful Theory of Goal Setting: A 35-Year Odyssey." *American Psychologist* 57 (9): 705–17.
- Locke, E. A., and G. P. Latham. 2013. "Goal Setting Theory, 1990." In *New Developments in Goal Setting and Task Performance*, edited by E. A. Locke and G. P. Latham, 3–15. Hove: Routledge.
- MacCallum, R. C., M. W. Browne, and L. Cai. 2006. "Testing Differences Between Nested Covariance Structure Models: Power Analysis and Null Hypotheses." *Psychological Methods* 11 (1): 19–35.
- MacCallum, R. C., D. T. Wegener, B. N. Uchino, and L. R. Fabrigar. 1993. "The Problem of Equivalent Models in Applications of Covariance Structure Analysis." *Psychological Bulletin* 114 (1): 185–99.
- Mason, G., G. Williams, and S. Cranmer. 2009. "Employability Skills Initiatives in Higher Education: What Effects Do They Have on Graduate Labour Market Outcomes?" *Education Economics* 17 (1): 1–30.
- Penke, L., and I. Deary. 2010. "Some Guidelines for Structural Equation Modelling in Cognitive Neuroscience: The Case of Charlton et al.'s Study on White Matter Integrity and Cognitive Ageing." *Neurobiology of Aging* 31: 1656–1660.
- Podsakoff, P. M., S. B. MacKenzie, J.-Y. Lee, and N. P. Podsakoff. 2003. "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies." *Journal of Applied Psychology* 88 (5): 879–903.
- Robotham, D. 2012. "Student Part-Time Employment and Consequences." *Education + Training* 54 (1): 65–75.
- Sauer, P. L., and A. Dick. 1993. "Using Moderator Variables in Structural Equation Models." *Advances in Consumer Research* 20: 637–40.
- Seibert, S. E., M. L. Kraimer, and R. C. Liden. 2001. "A Social Capital Theory of Career Success." *Academy of Management Journal* 44 (2): 219–37.
- Seijts, G. H., and G. P. Latham. 2011. "The Effect of Commitment to a Learning Goal, Self-efficacy, and the Interaction Between Learning Goal Difficulty and Commitment on Performance in a Business Simulation." *Human Performance* 24 (3): 189–204.

- Smith, V. 2010. "Enhancing Employability: Human, Cultural, and Social Capital in an Era of Turbulent Unpredictability." *Human Relations* 63 (2): 279–303.
- Smith, C., and K. Worsfold. 2015. "Unpacking the Learning-Work Nexus: 'Priming' as Lever for High-Quality Learning Outcomes in Work-Integrated Learning Curricula." *Studies in Higher Education* 40 (1): 22–42.
- Strauss, K., M. A. Griffin, and S. K. Parker. 2012. "Future Work Selves: How Salient Hoped-for Identities Motivate Proactive Career Behaviors." *Journal of Applied Psychology* 97 (3): 580–98.
- Sun, S. H., and M. Frese. 2013. "Multiple Goal Pursuit." In *New Developments in Goal Setting and Task Performance*, edited by E. A. Locke and G. P. Latham, 177–94. Hove: Routledge.
- Tansley, D. P., L. R. M. Jome, R. F. Haase, and M. P. Martens. 2007. "The Effects of Message Framing on College Students' Career Decision Making." *Journal of Career Assessment* 15 (3): 301–16.
- Taylor, A. R., and T. Hooley. 2014. "Evaluating the Impact of Career Management Skills Module and Internship Programme Within a University Business School." *British Journal of Guidance & Counselling* 42 (5): 487–99.
- Thune, T., and L. A. Støren. 2015. "Study and Labour Market Effects of Graduate Students' Interaction with Work Organisations During Education: A Cohort Study." *Education And Training* 57 (7): 702–22.
- Tomlinson, M. 2012. "Graduate Employability: A Review of Conceptual and Empirical Themes." *Higher Education Policy* 25: 407–31.
- Tymon, A. 2013. "The Student Perspective on Employability." *Studies in Higher Education* 38 (6): 841–56.
- Van Emmerik, I. J. H., B. Schreurs, N. de Cuyper, I. M. Jawahar, and M. C. W. Peeters. 2012. "The Route to Employability: Examining Resources and the Mediating Role of Motivation." *Career Development International* 17 (2): 104–19.
- Van Selm, M., and N. W. Jankowski. 2006. "Conducting Online Surveys." *Quality & Quantity* 40 (3): 435–56.
- Wilton, N. 2012. "The Impact of Work Placements on Skills Development and Labour Market Outcomes for Business and Management Graduates." *Studies in Higher Education* 37 (5): 603–20.